

Amendments to the Specification:

Please replace paragraph [0034] and [0037] with the following amended paragraphs:

[0034] Where quilting, molding or other contouring of a substrate is carried out before the printing onto the substrate, registration of the printing to the pre-applied contouring will usually be desired. To register the printing to pre-applied contours, the location of the contour pattern can be calculated in relation to a reference point on the substrate that can be sensed by sensors at the printing station. The location of the pattern can be directly sensed with a sensor 40 mounted on the print head 30, as illustrated respectively as 40a, 40b in Figs. 2 and [[3]] 2A. The print head 30 includes a nozzle or ink jet nozzle array 41 that is directed downward toward the upwardly facing surface 16 of a substrate such as the panel 15. The panel 15 may have, for example, depressions or channels 43 on its surface 16 that have been formed by stitching or molding, as illustrated in Fig. 2. The sensor 40 measures the distance from the nozzle 41 to the surface 16. Information from the sensor 40 can be communicated to the controller 35 and correlated with the longitudinal and transverse position information of the print head 30 and interpreted to determine the location of the contoured pattern so that the printed image can be applied to the surface 16 in registration with the pre-applied contour pattern.

[0037] Whether the panel 15 has a contoured pattern on its surface 16 or merely a textured material, print quality is maintained by maintaining precise spacing between the nozzle 41 and the surface 16 of the panel 15. Fig. [[3]] 2A illustrates a rigid panel 15 having its outer upwardly facing surface 16 covered with a coarse woven or textured fabric. As the print head 30 moves transversely on the cross bar 28, the vertical position, relative to the print head 30, of the point on the surface 16 of the panel 15 at which the nozzle 41 is directed varies, often one or more millimeters. To measure such distance variations, an optical or laser sensor 40b is provided either on the print head 30 or on the carriage at a fixed height from the plane of support of the fabric. The sensor 40b instantaneously measures the distance from the nozzle 41 to the surface 16

Application No. 10/716,724
Election and Amendment dated January 18, 2005
Reply to Office Action of December 27, 2004

of the panel 15 and communicates the measurement to the controller 35. The nozzle 41 is mounted on an output actuator 51 of a servo motor 50 mounted in the print head 30. The controller 35 sends a control signal to the servo motor 50 to move the nozzle 41 on the print head 30 vertically in response to the distance measurement from the sensor 40b to maintain a constant distance from the nozzle 41 to the surface 16 of the panel 15.